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1638 Page 1 of 6

#12



1600

RAW SEQUENCE LISTING

DATE: 11/05/2002

PATENT APPLICATION: US/09/647,841B

TIME: 16:16:41

Input Set : A:\EP.txt

Output Set: N:\CRF4\11052002\I647841B.raw

3 <110> APPLICANT: Arizona Board of Regents, acting for and on behalf of Arizona State
4 University
5 Winicov, Ilga
7 <120> TITLE OF INVENTION: EXPRESSION OF ALFIN1 AND METHODS FOR PRODUCING TRANSGENIC
PLANTS HAVING

8 INCREASED ROOT GROWTH AND ROOT SPECIFIC GENE ACTIVATION

10 <130> FILE REFERENCE: 12504.393 formerly 5475-US

12 <140> CURRENT APPLICATION NUMBER: US 09/647,841B

13 <141> CURRENT FILING DATE: 2000-10-05

15 <150> PRIOR APPLICATION NUMBER: PCT/US99/07902

16 <151> PRIOR FILING DATE: 1999-04-08

18 <150> PRIOR APPLICATION NUMBER: US 60/081,348

19 <151> PRIOR FILING DATE: 1998-04-09

21 <150> PRIOR APPLICATION NUMBER: US 60/128,083

22 <151> PRIOR FILING DATE: 1999-04-07

24 <160> NUMBER OF SEQ ID NOS: 11

26 <170> SOFTWARE: PatentIn version 3.1

28 <210> SEQ ID NO: 1

29 <211> LENGTH: 1613

30 <212> TYPE: DNA

31 <213> ORGANISM: Medicago sativa

33 <400> SEQUENCE: 1

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36 ttaaaattat atatatatat atatatatat atatatatat aataattttt atttaccaat 120
38 ttaaaattat atatatatat atatatatat atatatatat aataattttt atttatatta 180
40 ttacgttgat ggtaaaaaaa taaatataat ttgttaccat ttaaaagtca taaatatagt 240
42 acaatccaac cctttgagag gttaatgtgt gtgcggattt tctagataaa caaggygcca 300
44 ttcacgattc ttcttgggtgc agcttggaga accctatcct gggcttggaa gatttacttc 360
46 ttgttgatgc ttctagagta cagctcctta aggctgtagt ctagtttttt ttttcacttc 420
48 tctacccaaa aaaaaaaaaa tcataaatat agtttataca tataacttta ataaaaataa 480
50 aaaaatttca tccctaaaaa catagtagaa atttcataaa aaaaatattg tttataattt 540
52 acatgccgtt acggtaaaaa atggataaat tgggtatgga gtactagtaa ttaataaggt 600
54 tcattggtta aaaaaactaa aaaataattt ctctcctgat ttatatgaaa tgacattttt 660
56 ttggaacatg aaggggtattg attttttacca cctttttacc ctttcaaaagc cattcaagga 720
58 tgaatataga tttttgggcg atcaaacaca agaatcatta cgataacatg cttatacata 780
60 ccccgtaaat cttctttttt ttacccaata aacattgaaa tgttgcttct ttcgttaagc 840
62 ataaaaacat caaagtctag caaaatgttg tttttgcgat gacacatttc atatagttta 900
64 aaggatgcat gattcgatta caaaaacaaa atactaataa ttctagcaca aagtttaag 960
66 caatattata aagcttcata gcatgtggat attcatttag aaatatagat tagattgcc 1020
68 ctttcacac ggggtctaca gcaccacttg tcaactacatg tcaaaaatgt cctctagtac 1080
70 agcaccgctt tttacttgat tccccttgct catgcatgaa aaaaatcaaa acaatatttg 1140
72 gacacacaaa cttgccccca ctttcctttt tctttctgcc ctagtttggt tgagactcat 1200
74 attgatcaaa tttggctatg aattcaaaca aaaaattcac tctaccatt gcattgtgtg 1260
76 ggcccacata taaatccatg aaggatttca atgtccatcc aagtcaatga ttcaacatat 1320

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78 ataacattga ataatttaat tccaatttgc agtattatga tttagattga ttgctgcaat 1380
80 acgggtccgtg aatgtgatca ctcacgagaa agaggtatca aaatttcaag gtattttatt 1440
82 tatttttaac aaataaaatt tcaaggtcct gttcaccata taaacctcct cactcacacc 1500
84 caattctctt aagtgtatga cttcatagta cactacacta ctttctttga aacatggcta 1560
86 actatgctct agccaatggt ttcaccttc tcttgaactt gactaccta ctc 1613
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90 <211> LENGTH: 904
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92 <213> ORGANISM: Medicago sativa
94 <400> SEQUENCE: 2
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97 cgaactgttg aagaagtttt tagcgattac aaaggcagac gcgcgggttt gatcaaagct 120
99 ctcactactg acgttgaaaa gttttaccag ctgcctgatc ccgaaaagga gaattttgtgc 180
101 ctctatgggt ttccaaatga aacatgggaa gtgaacttgc ctgttgagga agtgcctcct 240
103 gaacttcccg agccagcatt ggggtataaac tttgctcggg atggaatgca ggagaaggac 300
105 tggttatcac tggttgcagt tcacagtgc tcattggctgc tcgctgttgc tttctatatt 360
107 ggtgcccgtt ttggatttgg taagaatgat aggaaaaggc tttttcagat gataaatgat 420
109 ctgcccacag tctttgagct tgcaacagga actgctaagg aatcaaagga ccaactgact 480
111 gctcacaaca atggtagcaa tagcaaatac aaatcaagtg gaaagtcccg ccagtctgaa 540
113 tcccagacca aggggtgtgaa gatgtctgca ccggtcaaag aagaggttga cagtggagaa 600
115 gaagaggaag aagatgatga tgaacaaggc gcaacctgtg gtgcttgttg tgataattat 660
117 ggcaccgatg aattctggat ctgttgtgat atgtgcgaga aatggttcca tggtaaattg 720
119 gttaaaatta ctctgcca ggctgaacac atcaagcaat acaagtgcc tggctgcagt 780
121 atcaagaagc caagaattgg atagctctga acgtttggac cattagcggg caagattaaa 840
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138 <211> LENGTH: 29
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140 <213> ORGANISM: Medicago sativa
142 <400> SEQUENCE: 4
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147 <211> LENGTH: 29
148 <212> TYPE: DNA
149 <213> ORGANISM: Medicago sativa
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156 <211> LENGTH: 29
157 <212> TYPE: DNA
158 <213> ORGANISM: Medicago sativa
160 <400> SEQUENCE: 6

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167 <213> ORGANISM: Medicago sativa
169 <400> SEQUENCE: 7
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173 <210> SEQ ID NO: 8
174 <211> LENGTH: 29
175 <212> TYPE: DNA
176 <213> ORGANISM: Medicago sativa
178 <400> SEQUENCE: 8
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183 <211> LENGTH: 29
184 <212> TYPE: DNA
185 <213> ORGANISM: Medicago sativa
187 <400> SEQUENCE: 9
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192 <211> LENGTH: 27
193 <212> TYPE: DNA
194 <213> ORGANISM: Medicago sativa
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200 <210> SEQ ID NO: 11
201 <211> LENGTH: 29
202 <212> TYPE: DNA
203 <213> ORGANISM: Medicago sativa
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208 <223> OTHER INFORMATION: n = A, C, T or G
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213 <222> LOCATION: (13)..(13)
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223 <400> SEQUENCE: 11
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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/647,841B

DATE: 11/05/2002
TIME: 16:16:42

Input Set : A:\EP.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; N Pos. 9,13,15